

## REMARKS

This amendment is responsive to the Non-Final Office Action dated August 21, 2008. Claim 1 stands rejected. Claims 2-10 are new. In view of the following remarks, Applicant respectfully submits that this application is in complete condition for allowance and requests reconsideration of the application in this regard.

### Rejections under 35 U.S.C. § 103

The Examiner has rejected claim 1 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,887,032 by Cioffi et al. (*Cioffi*) in view of U.S. Patent No. 7,158,563 by Ginis et al. (*Ginis*).

With respect to claim 1, the Examiner contends that *Cioffi* discloses all of the elements of Applicant's claim but for MIMO post-processing, which is disclosed in *Ginnis*. Applicant disagrees with the Examiner for the following reasons. *Cioffi* discloses a method of removing crosstalk, particularly near end crosstalk (NEXT), by implementing a NEXT canceller 506 between transmitting and receiving lines as shown, for example, in FIG. 5B, which is reproduced at the right. This estimation of the crosstalk is then added to/subtracted from the received signal on the receiver line 502 to remove crosstalk introduced from the transmitting line 500.

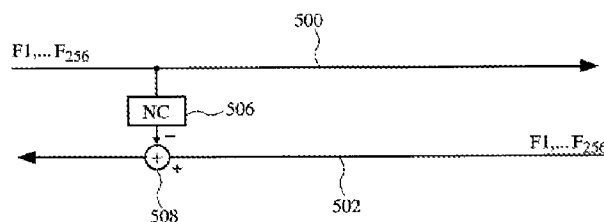
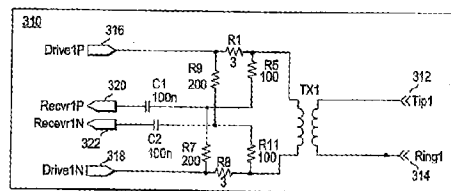
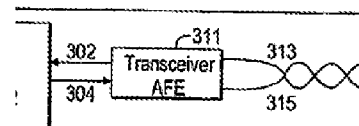


FIG. 5B

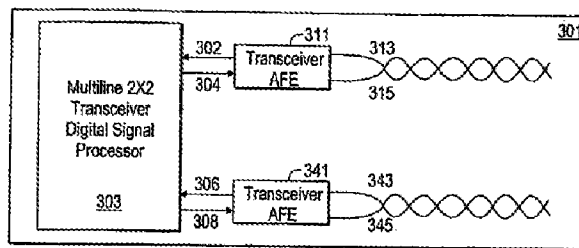
Applicant discloses this same basic configuration in FIG. 3 of Applicant's specification. As shown in the portions of FIG. 3 reproduced at the right, the Transceiver AFE 311 feeds portions of the outgoing signals on Drive1P 316 and Drive1N 318 to Receiver1N 322 and Receiver1P 320 respectively through resistors R7 and R9, similar to *Cioffi* which also introduces a portion of the transmitted signal to the received signal in order to mitigate crosstalk. However, there is no disclosure in *Cioffi* of introducing a split-pair or any other receiver, which may be used to mitigate crosstalk between pairs of transmission



lines as disclosed and claimed in embodiments of Applicant's invention.

The Examiner next asserts that MIMO processing disclosed in *Ginis* can be used with the crosstalk cancellation of *Cioffi* in order to further reduce crosstalk on the transmission pair. The result of *Cioffi* including MIMO post-processing from *Ginis* would again be very similar to FIG. 3 in Applicant's specification where the input and output of the transceivers are fed into a post processing unit 303, which is operable to perform MIMO post-processing as seen in the portion of FIG. 3 reproduced at the

right. *Ginis* fails to disclose using a split-pair or any additional receiver in conjunction with other processing to mitigate the crosstalk between pairs of transmission lines. FIG. 4A



and FIG. 4B in Applicant's specification illustrate embodiments of the invention including at least one split-pair receiver that assists in mitigating crosstalk in a multilane system in addition to increasing the number of receivers that can be used to identify sources of crosstalk noise, and therefore increase the number of receivers from which the crosstalk noise can be effectively removed. The combination of *Cioffi* and *Ginnis* fail to disclose any additional receivers, such as the split-pair receiver, recited in Applicant's claim 1.

Therefore Applicant submits that the combination of *Cioffi* and *Ginnis* fails to teach or suggest "using one or more split-pair receivers in a multilane communications system to identify crosstalk on a pair of transceivers coupled to the split pair receivers" as required by independent claim 1. Additionally, the Examiner provides no objective reason why one of ordinary skill in the art would be motivated to modify *Cioffi* and *Ginnis* to include the additional receivers as claimed in independent claim 1. Consequently, Applicant respectfully requests that the rejection for claim 1 be withdrawn.

New claims 2-4 depend from independent claim 1 and are patentable for at least the same reasons as set forth above. Furthermore, these claims recite unique combinations of elements not disclosed or suggested by *Cioffi* and *Ginnis*. Therefore, Applicant submits that claims 2-4 are patentable over *Cioffi* and *Ginnis*.

New independent claim 5 is a system claim similar to the method of claim 1. Claim 5 similarly recites "a split-pair receiver electrically connected to a line of the first pair of lines and a line of the second pair of lines and configured to identify crosstalk on the first and

second transceivers,” which, as set forth above with respect to claim 1, is not disclosed or suggested in *Cioffi* and *Ginnis*. Therefore, for the same reasons as set forth above with respect to claim 1, independent claim 5 is also patentable over *Cioffi* and *Ginnis*.

New claims 6-10 depend from independent claim 5 and are patentable for at least the same reasons as set forth above. Furthermore, these claims recite unique combinations of elements not disclosed or suggested by *Cioffi* and *Ginnis*. Therefore, Applicant submits that claims 6-10 are patentable over *Cioffi* and *Ginnis*.

### **Conclusion**

Applicant has made a bona fide effort to respond to each and every requirement set forth in the Office Action. In view of the foregoing amendments to the claims and remarks given herein, Applicant respectfully believes this case is in condition for allowance and respectfully requests allowance of the pending claims. If the Examiner believes any detailed language of the claims requires further discussion, the Examiner is respectfully asked to telephone the undersigned attorney so that the matter may be promptly resolved. The Examiner’s prompt attention to this matter is appreciated.

Applicant is of the opinion that no additional fee is due as a result of this Amendment except for a one month extension of time, which is hereby requested. Payment of all charges due for this filing is made on the attached Electronic Fee Sheet. If any additional charges or credits are necessary to complete this communication, please apply them to Deposit Account No. 23-3000.

Respectfully submitted,

December 22, 2008  
Date

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